

REMARKS

This Amendment is submitted in response to the December 3, 2003 final Office Action issued in connection with the above-identified patent application. By this Amendment, claim 9 (the sole independent claim), has been amended as set forth above. No new matter has been added. Upon entry of this Amendment, the pending claims will be amended independent claim 9, with claims 10 and 12-16 depending therefrom.

Turning first to formal matters, in the Office Action the Examiner has objected to claims 9, 13 and 15 for various reasons. As for claim 9, the Examiner has stated that the preamble makes it unclear whether applicant is claiming (1) a joint, or (2) a joint in combination with a cable. The Examiner also requested that the terms "and being" be inserted after "nut" in line 10 of claim 9 and also requested that the term "ends" in line 12 of claim 9 be amended to "end". In response it is believed that claim 9 as amended hereinabove overcomes the Examiner's objections. It should now be clear that claim 9 is not directed to the combination of a joint with a cable.

As for the objections to claims 13 and 15, claim 13 has been amended to replace the term "the" in line 4 with "a". Claim 15 has been amended to delete the phrase "through which said ball-bearing control cable passes". Thus, it is believed that the objections to these claims have now also been overcome.

Turning now to substantive matters, the Examiner has rejected claims 9, 10 and 12-14 as allegedly anticipated by U.S. Patent No. 6,109,132 (Frye). The Examiner has also rejected claims 9 and 16 as allegedly anticipated by U.S. Patent No. 4,243,192 (Johnson). For the following reasons, applicant respectfully traverses these rejections.

The present invention is a joint for supporting a ball-bearing control cable passing through a guiding tube in a wall. The joint has a nut positioned on one side of the wall which includes a

threaded sleeve extending from the one side of the wall to the opposite side of the wall where it is secured by a lock-nut. The joint also includes a ring (element 4 in Fig. 1) which is shaped as a portion of a ball and which is disposed in a spherical axial chamber in the nut. The ring is capable of rotating freely in the axial chamber of the nut. The guiding tube includes two sections (shown as elements g1 and g2 in Fig. 1) which mate together within the ring to form a single straight tube. As recited more clearly in amended claim 9, the ring is "dimensioned for rotating freely in all directions within the axial cavity of the nut". Moreover, the guiding tube is "dimensioned for facilitating longitudinal movement of the control cable within the guiding tube". In other words, the guiding tube is dimensioned to allow for movement of the passing-through ball-bearing control cable in a direction along the axis of the cable.

Dealing first with Frye, this reference is directed to a push-pull control cable assembly for use with a non-ball bearing control cable. Thus, the problem solved by the present invention, as articulated on page 1, lines 24-27 of the subject application -- that it is impossible in prior art control cable systems to replace a conventional control cable by a ball-bearing control -- is not encountered by the Frye device. In the Office Action the Examiner refers to the sub-assembly of Figs. 6 and 7 of Frye in rejecting claim 9. According to the Examiner, the wall in Frye is referred to as element 124 having an opening 126 in which an annular housing 122 seats. The annular housing has a central opening about an axis 150. A connecting ring 144 is disposed in the annular housing and accommodates insertion of a rod 56_B which passes through the connecting ring 144 through a bore 148. An adjusting member 158 having a head portion 160 and depending legs 166 seats within the opening of the connecting ring 144 so that the legs are disposed on either side of the rod 56_B passing through the ring.

Comparing this arrangement to applicant's Fig. 1 and to amended claim 9, the guiding tube of amended claim 9 is dimensioned for facilitating longitudinal movement of the control cable within the guiding tube. Although there is no "guiding tube" disclosed in the embodiments of Figs. 6 and 7 of Frye, it is submitted that even if a guiding tube was provided, the Frye device does not provide for longitudinal movement of a control cable passing through the guiding tube along the longitudinal axis of the assembly. In particular, and with reference to Fig. 6 of Frye, the adjusting member 158 having the head portion 160 serves as an end cap and securing device for one side of the connecting ring 144. Assuming, for argument sake, that the adjusting member 158 was substituted with a "guiding tube", the presence of rod 56_B will prevent -- as opposed to facilitate -- longitudinal movement of a control cable passing through the guide tube.

It is also noted that amended claim 9 states that the ring is "dimensioned for rotating freely in all directions within the axially cavity of the nut". In contrast, the Frye embodiment of Figs. 6 and 7 shows that once the connecting ring 144 is disposed within the annular housing 122 with the rod 56_B extending therethrough via opposed ports 146A and 146B, the width of the ports will obstruct and/or prevent rotational movement of the connecting ring in a direction through the longitudinal axis 150. In other words, the arrangement depicted in Figs. 6 and 7 of Frye only allow for axial movement of the rod 56B within the angle α . For these reasons, it is believed that amended claim 9 is not anticipated, nor rendered obvious by Frye and is patentable thereover.

In the Office Action the Examiner has also rejected claim 9 as allegedly anticipated by Johnson. A review of Johnson shows that it is not even concerned with a cable control system but, rather, with a ball pivot thrust flex joint. Moreover, a bolt 68 is secured within the ring 18 via a nut 70. There is no teaching of a guiding tube which is "dimensioned for facilitating longitudinal movement of a control cable" positioned within the guiding tube, as is now claimed by amended

claim 9. In fact, the bolt 68 is not capable of longitudinal movement because it is secured in place within the ring 18 by the nut 70. Accordingly, it is believed that amended claim 9 is also patentable over Johnson.

In the Office Action the Examiner has also rejected claim 15 as allegedly rendered obvious by the combination of Frye in view of U.S. Patent No. 4,381,163 (Witte et al.). Inasmuch as claim 15 is dependent on amended claim 9, it is believed that claim 15 is also allowable. Moreover, because claims 10, 12-14 and 16 are also dependent on amended claim 9, it is believed that those claims are also allowable.

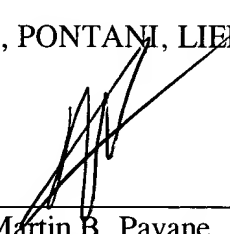
For all of the foregoing reasons, it is believed that all pending claims are now in condition for immediate allowance, and a favorable action in that regard is earnestly solicited.

It is believed that no fees or charges are required at this time in connection with the present application; however, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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